

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A biochip, consisting primarily of one or several dieplates and one or several substrates with or without probe immobilized, and comprising a maximized number of reactors, wherein:

- a. ~~said maximization of reactor number is performed by minimizing structure covered area on the substrate and/or maximizing effective area on the substrate, wherein said structure is partition structure of the reactor and/or structure other than the reactor, and~~
- b. ~~said partition structure is characteristically based on surface partition, hydrophobic surface partition, or height difference partition. said dieplate and said substrate are connected to form one or several closed flow reactors with inlet and outlet, wherein said connection between said dieplate and said substrate is either reversible or irreversible.~~

2-18. (Cancelled).

19. (Previously presented) The biochip of claim 1, wherein said substrate is made of any material which can form said reactor with a relatively small average area, including:

- a. inorganic material including glass, silicon and silicon compound.;
- b. organic macromolecular polymer including polypropylene, polyvinylchloride, polystyrene, nylon and nitrate cellulose ; and
- c. organic material coated with metal including gold and silver.

20. (Cancelled).

21. (New) The biochip of claim 1, wherein said irreversible connection is performed with one or more of the following forces:

- a. mechanic force generated by gravity, elasticity, screws or fixture;
- b. magnetic force generated by magnet or electric magnet;
- c. removable adhesion force produced by adhesive; and
- d. said dieplate is partial or entire machine-eliminable, when it is desired to open

or/and to lower height of said reactor formed by said irreversible connection.

22. (New) The biochip of claim 1, wherein said irreversible connection is performed with adhesive.

23. (New) The biochip of claim 1, wherein said dieplate is partial or entire machine-eliminable, when it is desired to open or/and to lower height of said reactor formed by said irreversible connection.

24. (New) The biochip of claim 1, said biochip being a variable biochip in which the reactor may be transformed from closed state to open state, wherein when said transformation needs to remove the reactor covering or/and reduce the reactor height, said dieplate and substrate is disconnected in case of the reversible connection, and said dieplate is partial or entire removed mechanically in case if the irreversible connection by irreversible adhesive.

25. (New) the biochip of claim 1, wherein said dieplate presents an elastic material.